

CROSBY hits a moving
.28kg PUCK WITH AN ^{INITIAL} velocity of
25m/s Right. the final velocity
is 37m/s Left. What impulse
did CROSBY put on the puck?

$$m = .28 \text{ kg}$$

Right is \oplus

$$v_i = 25 \text{ m/s Right}$$

$$v_f = -37 \text{ m/s Left}$$

$$\Delta P = ?$$

$$\Delta v = v_f - v_i$$
$$\Delta v = (-37 \text{ m/s}) - (25^+ \text{ m/s})$$

$$\Delta v = -62 \text{ m/s}$$

$$m = .28 \text{ kg}$$

$$\Delta P = m \Delta v$$
$$= (.28 \text{ kg})(-62 \text{ m/s})$$
$$\Delta P = -17.36 \text{ kg m/s}$$

CROSBY'S CONTACT TIME WITH THE PUCK WAS .3 S. HOW MUCH FORCE DID CROSBY APPLY?

$$\Delta p = -17.36 \text{ kg m/s}$$

$$\Delta t = .3 \text{ s}$$
$$F = ?$$
$$\Delta p = F \Delta t$$
$$\frac{-17.36 \text{ kg m/s}}{.3 \text{ s}} = \frac{F(.3 \text{ s})}{.3 \text{ s}}$$

$$F = -57.86 \text{ N}$$

LUNDQUIST CATCHES THE
PUCK THAT CROSBY SHOT.
WHAT IMPULSE DID LUNDQUIST
PUT ON THE PUCK?

$$m = .28 \text{ kg}$$

$$v_i = -37 \text{ m/s}$$

$$v_f = 0$$

$$\Delta p = ?$$

$$\Delta v = v_f - v_i$$

$$\Delta v = 0 - (-37 \text{ m/s})$$
$$\Delta v = +37 \text{ m/s}$$

$$\Delta p = m \Delta v$$
$$= (.28)(+37 \text{ m/s})$$
$$= 10.36 \text{ kg m/s}$$

$$\Delta t = .88 \text{ s}$$

How much Force did
LUNDQVIST PUT on the puck?